

community based psychiatric evaluation studies. The diagnosis generated by the questionnaires used as study instruments was strictly kept confidential and reconfirmed by consulting the senior psychiatrists for confirmation of their acceptability, content validity and reliability, before arriving at a final; diagnosis for data analysis. At the beginning, A Pilot study was conducted with randomly chosen data from 25 original research articles that surveyed elderly individuals in the age group of 60 years and above, residing in various parts of the world, some of these studies used in the pilot Study, were later include for statistical analysis in the final research project.

Data Analysis: The data was tabulated and analyzed by using the statistical package SPSS (Statistical package for social c=ciences) version 10.0 for Windows and EPI INFO version windows 2000. Findings were described in terms of median prevalence rates of depressive disorders in elderly and their corresponding Inter-Quartile range (IQR). Proportions and their 95% Confidence Intervals (CI) were used for the same purpose. Chi-square test and Chi-square for Linear Trend were applied for studying prevalence rates of elderly depressive disorders among various countries in the worlds and in India. Here, p- value <0.05 was considered as statistically significant.

RESULTS AND DISCUSSIONS

The search strategy yielded 896 potentially relevant studies, among these 143 were retrieved for more detailed evaluation. Though 77 studies met the inclusion criteria, but we could retrieve main article or structured abstract for only 74 studies which were included for the final analysis. Among these 74 selected articles, 69 (93.2%) had cross-sectional study design and 5(6.8%) had prospective study design that had not exclude d depression on baseline.

Two meta-analysis reports, one by Chen R. et al⁵ (1999, China) on 10 relevant studies and another by Copeland J.R.M. et al⁶ (2004, Amsterdam) on 14 relevant studies and also a systematic review report by Beekman A.T. et al⁷ (1999, Netherlands) on 34 relevant studies were included in this meta-analysis project. So, this study had actually taken into consideration the prevalence rates of depression in elderly from [74 + (10+14+34) = 132] survey reports from various parts of the world.

Determination of median Prevalence rate of depressive Disorders in Elderly The 74 included studies involved 4,87,275 elderly individuals from all the parts of the world at baseline. Among these 6 studies from India involved only 2,499 (0.5%) elderly individuals at baseline for assessment of presence of depression. The mean ages of the study population were reported in 68(85.1%) articles with mean ranging from (62-71) years. Here, 68 (91.9%) articles included gender distribution and (36%-64%) of participants were men (median=46%). The length of reported study period ranged from (3-84) months (median =9).

Only 52 (70.3%) studies used some of modern rating scales for diagnosis of depression in elderly. Among these, 14 used AGECA/T/GMS-AGECA/T, 4 used DIS/HDS, 8 used GMS/GDS, 11 used CSES-D and 15 used DSM/ICD criteria for the diagnosis of geriatric depression. The prevalence rate of geriatric depression was found to be higher in studies using psychiatric examination and operational definitions and studies used the geriatric depression sale 9GDS) or Geriatric mental State Schedule (GMS) alone.

The median Prevalence rate o Depressive disorders in the world for the

elderly population from 74 studies was determined to be 10.3% with inter-Quartile Range varying between 4.75 and 16.0%. Similar findings were reported by Kirby M. Et al⁸ (1997, Dublin) and Kay D.W.K. et al⁹ (1985,Hobart). Studies conducted by Geerlings M.L et al¹⁰ [(1990-96), Amsterdam], Newman S.C. et al¹¹ (1998, Canada), Liu C.Y. et al¹² 91993, China), also reported the prevalence rate of depression among the elderly to be 10.5%, 11.2% and 12.9% respectively.

The comparison of median prevalence rates of depression in elderly population of India and the rest of the world was also studied. It was found that the proportion of depressed elderly population in India (18.2%) was significantly higher than the rest of the world (5.4%) and this difference was found to be statically highly significant ($X^2 = 770.4$ and $p = 0.000000001^*$). Though there is an alarming increase of proportion of depressed elderly in India, but we should also keep in mind that there were only 6 relevant studies from India, covering only 0.5% of elderly participants of the world as compared to 68 studies from the rest of the world covering 993.5% of the participants.

The low prevalence of depression in elderly during recent years could be due the presence of better diagnostic instruments with optimum validity and reliability had been developed during the recent years to diagnose elderly depression in the community and ruled out cases of dementia which were often falsely diagnosed as depression in the past.

Though the proportion of elderly individuals affected with depression was significantly lower in Asia (4.2%) than Europe (10.9%) and America (8.4%), but the number of depressed elderly individuals was significantly higher in Asia which was evident from 14 studies conducted in various Asian countries covering 74.5% of the population sample. Studies from the developing countries like India had reported a very high prevalence rate of 21.9% with IQR ranging from (11.6-31.3). Care and bonding from family support systems, lesser competitive life styles and improved mental health facilities with their integration with primary health care could account for lesser prevalence rates in some of the developed Asian countries.^{1, 2, 4}

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